

**To:** Manzanilla, Enrique[Manzanilla.Enrique@epa.gov]  
**From:** Harris-Bishop, Rusty  
**Sent:** Thur 8/13/2015 12:12:37 PM  
**Subject:** Re: R9 data interpretation

This is great news!

Sent from my iPhone

On Aug 13, 2015, at 12:25 AM, Manzanilla, Enrique <[Manzanilla.Enrique@epa.gov](mailto:Manzanilla.Enrique@epa.gov)> wrote:

We sent to OSWER tonight.

I cut and paste Nuggets from the Interpretation of the Navajo area data which is still has to go through the headquarters and Durango Unified Area Command. So its not ready for disclosure yet:

The data represent validated results of samples collected from Aug. 5 to Aug. 9, 2015. Although sediment sampling has also commenced, at this time the data analysis and validation are not complete and, therefore, the results will not be presented.

#### San Juan River into the Navajo Nation

EPA initiated a sampling effort on Aug. 8, 2015, to assess the impacts of the blowout at the Gold King Mine near Silverton, Colo. Surface water samples were collected on Aug. 8, 2015 at four sampling location on the San Juan River from Farmington, New Mexico to Shiprock, New Mexico (in order from upstream to downstream, SJLP, SJFP, SJHB, and SJSR). At the sampling location labelled SJHB (Hogback) just upstream from Shiprock a water sample was collected before the contaminant plume reached the location by the Navajo Nation Environmental Protection Agency (NNEPA) and the analytical data shared with the United States Environmental Protection Agency (US EPA); this sample can be used to characterize baseline metals concentrations, to identify the arrival of the plume and monitor the return of river concentrations to baseline conditions. Surface water samples have been analyzed for 24 metals, which include arsenic, cadmium, lead, mercury and others, but not for radionuclides. These sampling efforts are ongoing but at this time the only data available for interpretation are the NNEPA data at SJHB from August 7, 2015 and the data from August 8, 2015 collected at all four

locations by the US EPA. The data represent unvalidated results. As such, the data interpretation discussed below can only be viewed as informed speculation and not as definitive results suitable for directing response actions or discussion in a legal setting. A more complete evaluation of the data as it relates to the speculative interpretation below will depend upon reconsideration of this interpretation by validated data from more sampling locations and subsequent sampling dates.

Regarding human health, preliminary dissolved metals results were compared to the more conservative of EPA MCLs, EPA secondary Drinking Water Regulations, EPA Health Advisories, recreational screening levels developed by Region 8 and screening levels adopted by the Navajo Nation. The results for the dissolved (filtered) metals surface water preliminary data indicate that all four locations were less than the human health-based drinking water standards or advisories (MCLs, or where no MCL is available, lifetime Health Advisories). Two metals, aluminum and iron were present in the SJSR (near Shiprock, NM) sample at concentrations above secondary MCLs (which are established based on cosmetic or aesthetic – taste, odor or color – properties of drinking water); concentrations of these two metals were well below Region 8 screening levels for human recreational use. At the time of sampling therefore, dissolved metals concentrations in the river water were acceptable for recreational use. At this time, the sediment has not been fully analyzed.

An even more speculative interpretation of these data might suggest that by today, August 12, 2015, the pulse from Gold King has reached Lake Powell. This speculation derives from the facts that the Gold King Pulse appears to have reached Shiprock by August 8, 2015, at least 3 days after the initial release. If the transport rate of the pulse from Shiprock to Lake Powell was at all similar to the transport rate from Gold King to Shiprock, it seems likely the leading edge of the increasingly attenuated plume has had sufficient time to reach Lake Powell.

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**From:** Guria, Peter

**Sent:** Wednesday, August 12, 2015 10:53 PM

**To:** Manzanilla, Enrique; Wise, Robert

**Subject:** FW: R9 data interpretation

Data interpretation for R9.

**From:** Hiatt, Gerald  
**Sent:** Wednesday, August 12, 2015 10:46 PM  
**To:** McKean, Deborah; Black, Ned; Delgado, Eric; Nattis, Randy; Wise, Robert  
**Cc:** Loesel, Matthew; McComb, Martin; Rauscher, Jon; Guria, Peter; Allen, HarryL  
**Subject:** R9 data interpretation

Attached please find the R9 interpretation of the preliminary surface water sampling results for 4 locations along the San Juan River as it flows into the Navajo Nation-see last section: "San Juan River into the Navajo Nation"

**From:** McKean, Deborah  
**Sent:** Wednesday, August 12, 2015 6:44 PM  
**To:** Hiatt, Gerald; Black, Ned; Delgado, Eric; Nattis, Randy; Wise, Robert  
**Cc:** Loesel, Matthew; McComb, Martin; Rauscher, Jon; Guria, Peter; Allen, HarryL  
**Subject:** RE: Please find attached the validated data tables for Region 6 for Surface Water Samples taken Aug 6-8, 2015

I only sent you the write-up so you could see the format of how the summary should look to match the R8 and R6 write-ups. Please get me something that you feel describes your data, the screen you have done and how the screen turned out. The data are supposed to be posted in the morning so I need this ASAP.

**From:** Hiatt, Gerald  
**Sent:** Wednesday, August 12, 2015 7:38 PM  
**To:** McKean, Deborah; Black, Ned; Delgado, Eric; Nattis, Randy; Wise, Robert  
**Cc:** Loesel, Matthew; McComb, Martin; Rauscher, Jon; Guria, Peter; Allen, HarryL  
**Subject:** Re: Please find attached the validated data tables for Region 6 for Surface Water Samples taken Aug 6-8, 2015

I'm seeing Deb's writeup in Word as an example of how to present the data, but no data files. Maybe b/c Outlook strips off attachments when an email is forwarded(?)

Gerald F.S. Hiatt, Ph.D.  
Senior Regional Toxicologist  
U.S. EPA, Region 9  
415-972-3064  
[hiatt.gerald@epa.gov](mailto:hiatt.gerald@epa.gov)

Please be advised I have only limited ability to use email when not in the office (e.g., on travel) so please be patient with any delays in communication

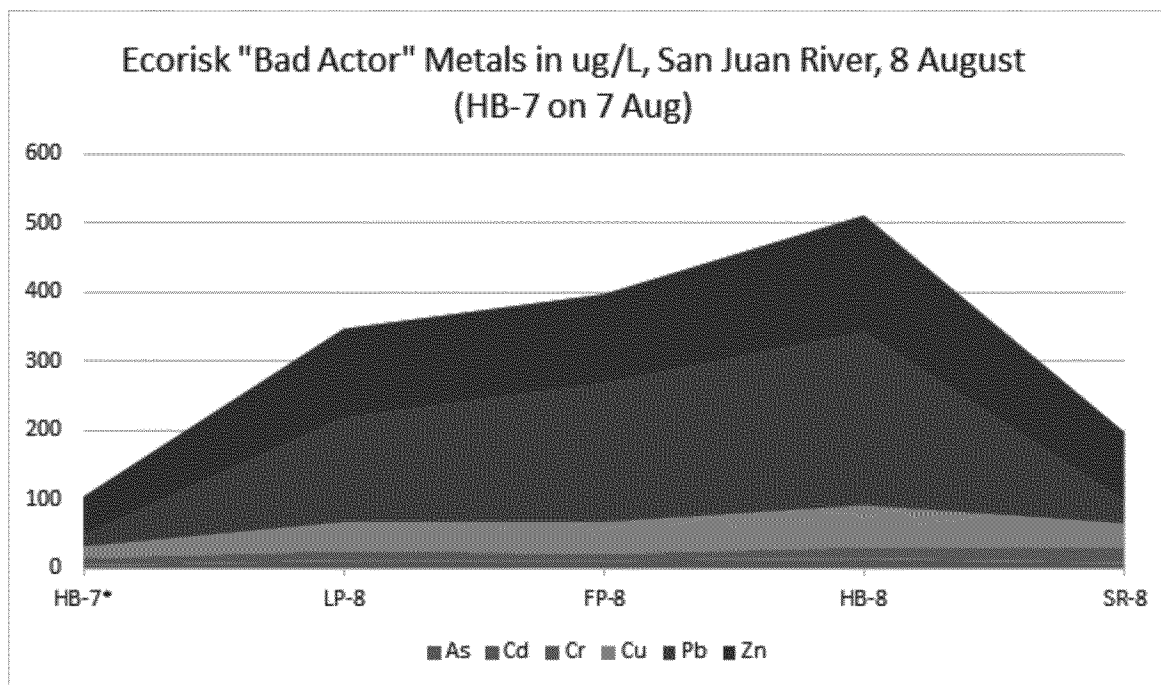
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**From:** McKean, Deborah  
**Sent:** Wednesday, August 12, 2015 5:15 PM  
**To:** Black, Ned; Delgado, Eric; Nattis, Randy; Wise, Robert  
**Cc:** Loesel, Matthew; McComb, Martin; Rauscher, Jon; Hiatt, Gerald; Guria, Peter; Allen, HarryL  
**Subject:** RE: Please find attached the validated data tables for Region 6 for Surface Water Samples taken Aug 6-8, 2015

Please see the attached data summary report. Can you please add to this in a form similar to that provide by Regions 6 and 8?

**From:** Black, Ned  
**Sent:** Wednesday, August 12, 2015 3:48 PM  
**To:** Delgado, Eric; McKean, Deborah; Nattis, Randy; Wise, Robert  
**Cc:** Loesel, Matthew; McComb, Martin; Rauscher, Jon; Hiatt, Gerald; Guria, Peter; Allen, HarryL  
**Subject:** RE: Please find attached the validated data tables for Region 6 for Surface Water Samples taken Aug 6-8, 2015

Gerry Hiatt and I have been looking at the data from the San Juan River sites sampled on 7 & 8 August. It looks like the pulse had not reached Hogback by August 7. On August 8, it appears the pulse was in the San Juan River, spread between Farmington and Shiprock with the peak metals concentrations at Hogback. Gerry has some further thoughts and observations. Regardless, this is has to be viewed as a very preliminary observation based almost entirely on data from 4 sites on one day. We can be much more definitive after we see data from other days.



ned black, ph.d.

us epa r9

regional cercla ecologist

415-972-3055

Please be advised I currently have limited access to email when I am not in the office (e.g., on travel), therefore please be patient with any communication delays.

**From:** Delgado, Eric

**Sent:** Wednesday, August 12, 2015 2:14 PM

**To:** McKean, Deborah; Nattis, Randy; Wise, Robert; Black, Ned

**Cc:** Loesel, Matthew; McComb, Martin; Rauscher, Jon

**Subject:** Re: Please find attached the validated data tables for Region 6 for Surface Water Samples taken Aug 6-8, 2015

Ned?

Sent from my iPhone

On Aug 12, 2015, at 15:48, McKean, Deborah <[mckean.deborah@epa.gov](mailto:mckean.deborah@epa.gov)> wrote:

How is the region 9 data interpretation coming?

**From:** Loesel, Matthew

**Sent:** Wednesday, August 12, 2015 2:36 PM

**To:** McKean, Deborah; McComb, Martin

**Cc:** Delgado, Eric; Rauscher, Jon

**Subject:** Please find attached the validated data tables for Region 6 for Surface Water Samples taken Aug 6-8, 2015

Matt Loesel

R6 Planning Section Chief

US EPA – Region 6

817-271-4586

<Data Sum\_R9 150812.docx>